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ABSTRACT

This study examines the effect of language study on the English reading skills of sixth-grade school children. Achievement in reading skills of a control group of students receiving no foreign language instruction was compared with that in the Latin instruction group. Differences in scores of pretests and posttests of the more than 1100 students in three categories of reading achievement--vocabulary, comprehension, and total reading skills--were used as the data in determining average achievement in each group. Results of the study indicate that there is a significant difference between reading achievement scores of sixth-grade students receiving foreign language instruction and students with no foreign language instruction. The report includes: (1) introductory remarks, (2) review of related literature, (3) the problem, (4) methods and procedures, (5) limitations of the study, (6) presentation and analysis of data, and (7) conclusions and recommendations. (RL)

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A STUDY OF THE EFFECT OF LATIN INSTRUCTION ON ENGLISH READING SKILLS OF SIXTH GRADE STUDENTS IN THE PUBLIC SCHOOLS OF THE DISTRICT OF COLUMBIA, SCHOOL YEAR, 1970-71

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TABLE OF CONTENTS

Abstract ii

Introduction..... 1

Presentation and Analysis of Data..... 6

Conclusions and Recommendations..... 12

Bibliography..... 14

Abstract

The Department of Research and Evaluation of the Public Schools of the District of Columbia was asked by the Department of Foreign Languages to evaluate the effect of the foreign language program, particularly the Latin Program, among the sixth grade students during the school year 1970-71. Eleven schools were the focus of the entire study since the achievement in English reading skills of two Spanish classes and eight French classes was included. The achievement in English reading skills of a control group of students in 25 classes receiving no foreign language instruction was compared with those in the Latin instruction group.

The differences in scores in pretest and posttest of 1132 sixth grade students in three categories of reading achievement, Vocabulary, Comprehension and Total Reading Skill, were the data in determining average achievement of each group. It was hypothesized that because of the close association between the English and Latin languages, first-hand knowledge of Latin prefixes, roots and suffixes should help sixth grade students in English reading achievement skills.

The pretest-posttest control group design was followed. Average progress of each group was compared by the t test for comparisons. Both the group of Latin instruction classes and the foreign language group of French and Spanish classes achieved significantly higher than the control group with no foreign language instruction at all.

INTRODUCTION

The study of Latin has not been given high priority in most elementary public schools of the large cities. However, in the Public Schools of the District of Columbia a program of Latin instruction was instituted in 1966 by its Department of Foreign Languages. This has since been expanded to include during the school year 1970-71 seventy-three classes in sixty-eight schools, and nearly 2,000 sixth grade students.

Two justifications have been advanced favoring the study of Latin in elementary and secondary schools. One is that the study of Latin gives a first-hand knowledge of Latin prefixes, roots and suffixes. Since approximately one-half of English words have descended from the Latin language, the study of Latin should improve the ability to read and communicate in English. The other justification is not dependent on this hypothesis. It states that the study of Latin language, history and culture is important in its own right. Proponents of this view say that the study of the Latin language and culture is a key to an understanding of American culture.

Review of Related Literature

In reviewing literature for research studies pertinent to this subject, it was found out that there is a paucity of information relative to the effect of Latin instruction on the English reading skills of elementary school children. Some publications, however, carry articles on some aspects of Latin instruction.

Mrs. E.V. Stearns(7) lists five practical uses of the study of Latin. These are:

1. One half of English words have descended from the Latin language. To know even some Latin is to better understand English.

2. In English there are many actual Latin words and expressions used without any change of spelling but pronounced usually as if they were English words.

3. Knowledge of Latin helps us to spell English words.

4. Knowledge of Latin roots is useful in the study of arithmetic, algebra, science, physiology, pharmacy, medicine, law, civics, methodology and religion since many of the technical words and expressions in these disciplines are traditionally of Latin origin.

5. Authorities say that 90% in the so-called "Romance" languages, i.e. French, Portuguese, Spanish and Italian are of Latin origin. The study of Latin should help in the study of these modern languages.

In a journal article, Harry Reinert (6) disapproves of audiolingual methods of teaching Latin. Since Latin is a dead language students should not be prepared to use it in the same way, i.e., for the purpose of social communication, as a living language.

For a different reason, David H. Kelly (2) approves of the audiolingual methods, since these include grammar, not indeed as a set of learned rules, but as an inherent part of that which is heard and spoken.

These authors, as well as all teachers and writers promoting the study of Latin, by whatever methods and for whatever reasons, should appreciate any research studies on the effectiveness of Latin instruction.

The Problem

The purpose of this study is to determine the effect of Latin instruction among a sample of sixth grade students on their reading skills as measured by standardized achievement test in reading.

A corrollary to this problem is to determine the effect of other foreign language instruction in the reading skills of sixth grade students.

The over-all purpose of this study will be accomplished by testing the following hypothesis:

1. There are no significant differences in the reading achievement scores of a sample of sixth grade students receiving Latin instruction and students taking no foreign language instruction.

2. There are no significant differences between the reading achievement scores of sixth grade students receiving French or Spanish instruction and students taking no foreign language instruction.

3. Reading achievement scores of students taking any kind of foreign language instruction do not differ significantly.

Methods and Procedures

Eleven elementary schools of the Public Schools of the District of Columbia were chosen for this study. In nine of these schools one or more of the sixth grade classes received instruction in Latin. Also in these schools are two classes of French and eight classes of Spanish. Classes receiving foreign language instruction were chosen randomly by the principal in each school. All classes in the District during the school year were heterogeneously grouped.

The rationale in the selection of the eleven schools was based on the fact that eventually a follow-up study may be conducted for an in-depth study of the various factors affecting achievement of students. Participation in special programs, such as the Foreign Language program, will be considered as one of the independent variables for predicting achievement. This type of analysis is only possible in the 16 pilot schools of the Evaluation System where a comprehensive data base on pupils, programs and teachers has been developed. Of the sixteen pilot schools, eleven offer foreign language instruction to the sixth graders. These are the eleven sample schools in this study.

The reading achievement scores of all pupils in all sixth grade classes in the eleven schools were obtained both for the fall of 1970 (October scores) and spring of 1971 (May scores). The test administered on both occasions was the Comprehensive Tests of Basic Skills. This test separately scores reading abilities in the categories of Vocabulary, Comprehension and Total Reading abilities. Scores are expressed in grade equivalents using the Large Cities norms. In giving the grade equivalents, the test makers usually peg them to the 10 months of the academic year. September, the start of the school year, usually counts as zero, or for sixth graders, 6.0. March, six months into the year, is 6.6 and May, two months farther along is 6.8.

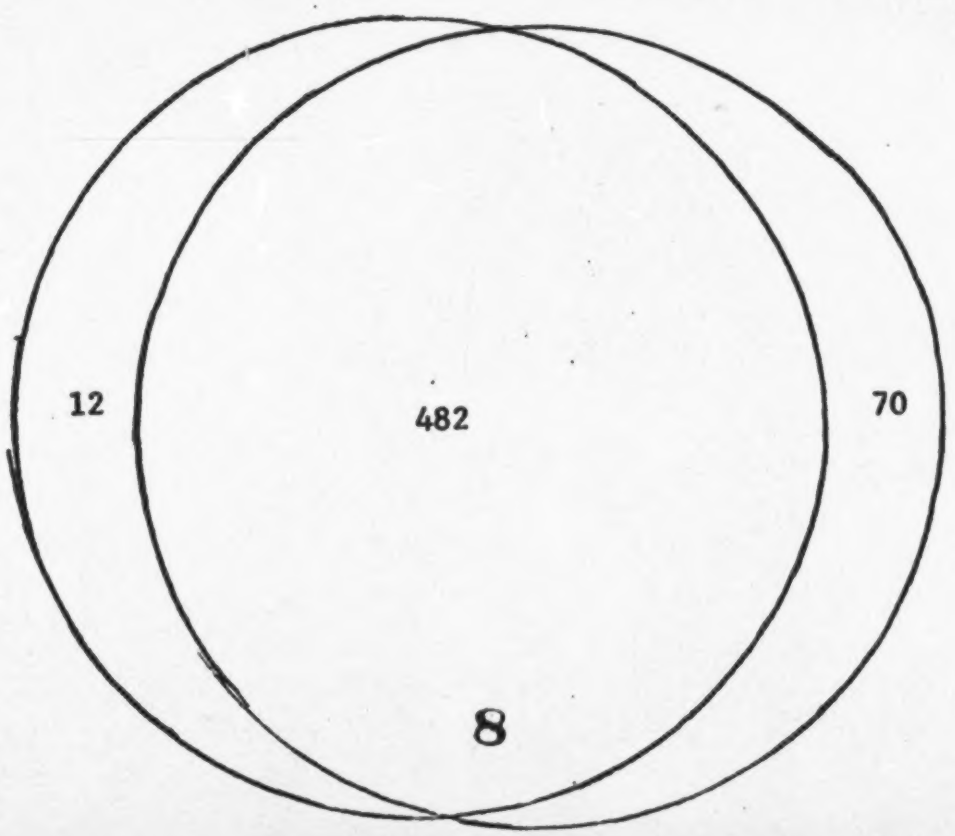
To determine the effect of foreign language instruction on the English reading skills of sixth grade students, comparisons of the reading progress of three groups of students were made. The first group consists of all sixth grade students in the sample schools who had Latin instruction during the school year 1970-71. The second group consists of students who took French or Spanish as a foreign language. All sixth grade students in the sample schools who had no foreign language instruction at all were considered for the third group. Table 1 gives the number of classes and students in each group.

TABLE 1

Number of Sample Sixth Grade Classes and Students in Each Group

Group	No. of Classes	No. of Students
I - Latin	10	233
II - French - Spanish	10	249
III - No Foreign Language	25	650
Total	45	1132

Two types of comparisons were performed on the data. The first comparison deals with individual progress of all students in each category of reading skills. The difference in the score of each pupil between the pre and post testing was defined as progress. The mean score for each group was derived by taking the sum of the individual students "progress score" and dividing by the total number of students in each group. Since progress of every individual student was desired, it was necessary to match names on the pre and post record sheets. It was found, for example, that in the 10 Latin classes and 10 French-Spanish classes about 70 students did not appear in the posttest roster; 62 names of those taking the posttest did not appear in the pretest roster.



The two circles indicate that 544 students took the posttest and 552 took the pretest. The shaded area in the center is composed of 482 students whose names appear in the class record sheets of both pre and posttests. These differences are due to some students not being present on the day of either pre or posttesting, or some students transferring to other schools. Only students with pre and posttest scores were included in the analysis.

The second type of analysis was to take the class as the unit of measurement and comparison. The statistics used in computing the reading progress was the average of the class means of the groups for each category of reading skills. This additional phase of the study was undertaken in an attempt to check or validate the results from the first method.

Limitations of the Study

The results of this study should be interpreted in the light of the following limitations:

1. Standard achievement test scores are influenced by a number of factors. They do not in themselves truly represent all the knowledge and skills a child learns in school. A classroom environment conducive to learning, a teacher with a pleasing personality, parents supportive of schools' efforts to educate the child, pupils' drive, motivation and emotional balance are factors that bear direct relationship with achievement of students. However, this study has not attempted to control any of these factors by way of equating groups. The main source of data was achievement test scores in reading. Reactions of teachers, principals, pupils and parents to foreign language instruction in the elementary grades were not sought.

2. There is the question of the kind of instrument to measure academic achievement. There is the obvious disadvantage of using a test prepared for a given group to a group which is by definition of a different background and locale.

PRESENTATION AND ANALYSIS OF DATA

The English reading achievement scores on the categories of Vocabulary, Comprehension and Total Reading for each pupil with pre and posttest results were the basis of analysis. Group I consists of all students from the eleven sample schools who took Latin in their sixth grade during the school year 1971-72. Group II are students with Spanish or French as a foreign language. Group III is the control group which are all the sixth graders in the sample schools without any foreign language instruction.

Method 1 - Students' Individual Scores as the Basis of Analysis

Table 2 gives the mean score under each category of reading ability for the three groups. The table shows the achievement base line as of October, 1970; the achievement as of May, 1971; and the differences in the three categories indicating progress in reading achievement. All scores are expressed in grade equivalents.

TABLE 2

Mean Scores and Progress (in Grade Equivalents) In English Reading Achievement Skills of Sixth Grade Students by Reading Skills and by Group, October, 1970 and May, 1971.

Group	Vocabulary			Comprehension			Total Reading		
	Oct.	May	Diff.	Oct.	May	Diff.	Oct.	May	Diff.
I - Latin Group	5.48	6.88	1.40	5.55	7.10	1.55	5.47	6.96	1.49
II - French-Spanish Group	5.45	6.71	1.26	5.54	7.05	1.51	5.46	6.84	1.36
III - No Foreign Language Group	5.54	6.50	.93	5.92	7.01	1.09	5.67	6.69	1.02

An inspection of Table 2 reveals that during the eighth month period between October, 1970 and May, 1971 the Latin Group achieved greater progress than the No Foreign Language Group in all categories.

Of special interest is the fact that the Latin Group scored lower in October in each of the categories of Reading skills but ended up achieving better. The low scores of the Latin Group in October substantiate the fact that Latin was taught in classes randomly chosen. In other words, it was not a subject offered only to classes that were doing well in reading skills. The differences in progress given in months between the two groups under study were tested by means of the t-test. Table 3 presents the progress in months of the two groups for each type of Reading skills and the significance level of the difference in progress scores. The Latin group achieved significantly better than the No-Foreign Language Group in Vocabulary, Comprehension and Total Reading.

TABLE 3

A Comparison of the Mean Progress Scores in Reading Skills Of Students Taking Latin and Students with No Foreign Language in the Sixth Grade of Sample Elementary Schools, D.C. Public Schools From October 1970 to May 1971.

Reading Skills	Mean Progress in Reading Skills (In Months)		
	Latin Group	No Foreign Language Group	Difference Between Groups
Vocabulary	14	9	5*
Comprehension	16	11	5*
Total Reading	15	10	5*

* Significant at the 5% level

Another group comparison made was between the group with French or Spanish as a foreign language in the sixth grade and the group with no foreign language at all. The result of this comparison is given in Table 4 where the Spanish-French group emerged better in all categories of reading ability. A difference of 4 months in each case was established in favor of the Spanish-French group. The differences were significant at the five per cent level.

TABLE 4

A Comparison of the Mean Progress Scores in Reading Skills of Students Taking French and Spanish and students with no Foreign Language in the Sixth Grade of Sample Elementary Schools, D.C. Public Schools from October 1970 to May 1971.

Reading Skills	(Mean Progress in Reading Skills (In Months)		
	Spanish-French Group	No Foreign Language Group	Difference Between Groups
Vocabulary	13	9	4*
Comprehension	15	11	4*
Total Reading	14	10	4*

* Significant to the 5% level.

If the results of this study supports the hypothesis that study of the Latin language in the sixth grade improves English reading skills, does the study of other foreign languages also help? Should the study of Latin have the preference in this regard over the study of other foreign languages at this level?

A test similar to the method of the previous one was made in an attempt to resolve these questions. Reading achievement scores in three categories of English reading skills were obtained for the ten foreign language classes, two Spanish instruction and eight French instruction classes, in the eleven schools. In order to show gains made in achievement, scores for October 1970 and scores for May 1971 were used. The same procedures were followed as in the first comparison of groups. The possible statistical significance of the difference between average progress of both groups: Group I, made up of ten Latin instruction classes, and Group II, made up of eight classes taking instruction in French and two classes taking instruction in Spanish, was tested. It is very important to note here that the children in the Spanish and French group were in their fourth year of Spanish and French instruction. The Latin group was given Latin instruction only for one year.

Table 5 shows comparative progress in English reading achievement skills of the two groups. The classes taking Latin instruction average slightly higher in all three categories than the other foreign language classes. The t test showed that these differences were not statistically significant.

TABLE 5

A Comparison of the Mean Progress Scores Made in Reading Skills of Students Taking Latin Instruction and Students Taking French or Spanish as a Foreign Language in the Sixth Grade of Sample Elementary Schools, D.C. Public Schools.

Reading Skills	Mean Progress in Reading Skills (In Months)		
	Latin Group	French-Spanish Group	Difference Between Groups
Vocabulary	14	13	1
Comprehension	16	15	1
Total Reading	15	14	1

Method 2 - Classes as the Unit of Measure

In a few classes taking Latin, students who were severely retarded in Reading skills were asked to attend remedial instruction in Reading during the period devoted to Latin instruction. The situation gave rise to the question of parallel control and experimental groups. If students who were severely retarded in reading did not attend the Latin instruction, the logical step to do was also to eliminate the scores of the severely retarded in the no-foreign language group. Since it was not possible to identify students with equal deficiency in the control group, a second method of analyzing the data was to treat the class as the unit of measure. Reading scores of the few retarded students in the Latin class will be reflected in the class averages. The findings of this method of analysis would help validate or confirm results using the first method where individual scores were used.

The average reading achievement in English in the three categories of Reading skills of each class was the basis of the mean average of the group. This procedure, in October 1970, and repeated in May 1971 gave the

basis for "difference" scores indicating relative progress in achievement. Table 6 shows the achievement base line as of October, 1970; the achievement as of May, 1971, and the differences in three categories indicating progress in reading achievement for each of the three groups.

An inspection of Table 6 shows that during the eight month period, the Latin group achieved better in all three categories. That this difference could have occurred by chance was tested according to the laws of statistical probability as applied to comparative studies. The t test for difference between group average revealed that the differences between the Latin group and the no-foreign language group as well as the differences between the French-Spanish group and the no-foreign language group were significant to the 5% level.

TABLE 6

Average Reading Achievement (in Grade Equivalents) of Sixth Grade Classes by Reading Categories and by Groups, October, 1970 and May, 1971.

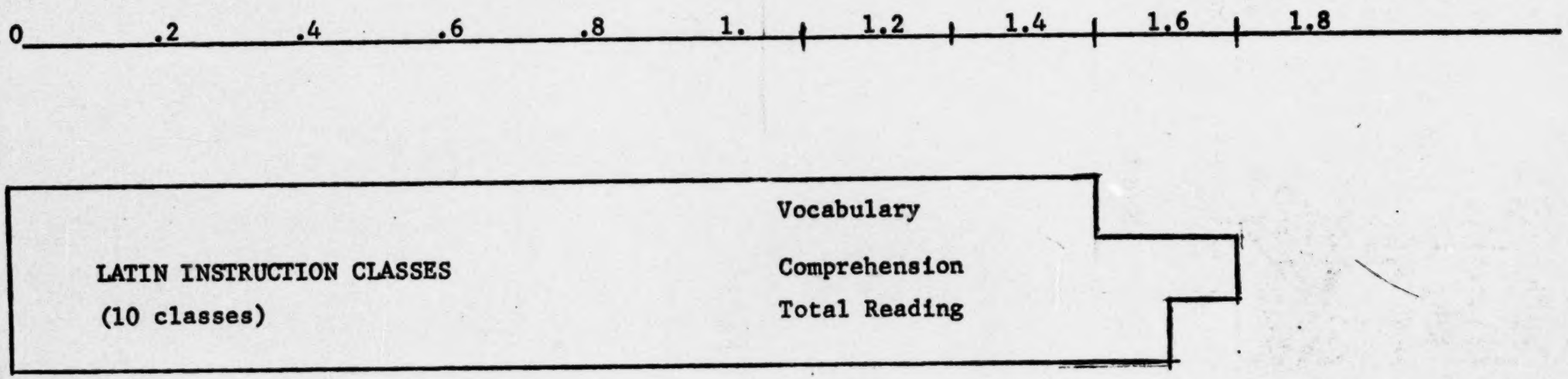
Group	Vocabulary			Comprehension			Total Reading		
	Oct.	May	Diff.	Oct.	May	Diff.	Oct.	May	Diff.
I Latin	5.18	6.70	1.52	5.28	6.98	1.70	5.22	6.81	1.59
II French-Spanish	5.31	6.68	1.37	5.36	6.97	1.61	5.30	6.78	1.48
III No Foreign Language	5.43	6.61	1.18	5.64	6.88	1.24	5.53	6.71	1.18

Data given in Table 6 are graphically represented in Figure 1.

It can therefore be stated with some degree of confidence that the reason for the significant differences in English reading achievement skills of the Latin group was due to the treatment, that is Latin instruction. The assumption that this is due to the close association between the English and Latin languages seems to be confirmed. The same conclusion holds true for the results of the French-Spanish group. French and Spanish languages belong to the same family of the so called "Romance" languages.

Figure 1

"Progress Scores" In Grade Equivalents of Sixth Grade Classes
By Reading Skills and By Groups



CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study set out to test the following hypotheses:

1. There is no significant difference between reading achievement scores of sixth grade students receiving Latin instruction and students with no foreign language at all.

2. There is no significant difference between reading achievement scores of sixth grade students receiving French and Spanish instruction and students with no foreign language at all.

3. Reading achievement scores of students taking any kind of foreign language instruction do no differ significantly.

Results of the study indicate that the first two hypotheses were rejected. Differences in the achievement scores in all categories of the reading skills were found significant to the 5% level.

The third hypothesis is upheld. There were no significant differences in the average scores of the Latin group when compared with the average scores of the French-Spanish group.

The findings of this study give rise to a number of implications. If the results are indicative of a general trend, then Latin instruction serves a dual purpose. It has a positive transfer effect on the mastery of English language. It leads students to learn a foreign language and provides opportunity for appreciation of other people's culture. However, the fact that the French-Spanish group scored significantly better than the no-foreign language group leads one to question whether any foreign language would produce the same effect. Why Latin? Why not French or Spanish instructions which have positive effect on English reading skills and still have a high practical value. At this point, it is well to emphasize that if positive transfer effect to the mastery of English reading skills is the primary consideration, Latin is still far superior. The positive effect on reading skills associated with Latin instruction for a year is equalled but not surpassed by French and Spanish instruction for four years.

American society is so diverse reflecting the different cultures, languages and backgrounds of its people. The teaching of French and Spanish may develop in the children the facility of expression in these languages; thus, they can communicate with their fellow Americans who are of French or Spanish backgrounds. An understanding of these languages

may also prove helpful when students go to college where foreign languages are prerequisites in the pursuit of technical courses.

The question then is, "What is the best foreign language to be offered to the children?" This is a challenging question which needs to be pursued.

Recommendations

In the light of the findings of this study the following recommendations are made:

1. A well-planned study concerning the same problems of this study be conducted. Control and experimental groups be selected at the beginning of the school year and equated on as many factors as possible. Such factors may include achievement test scores, special program participation, some indicators of students' motivation and drive, and teachers and classroom variables. Holding constant as many variables as possible, will lead to clearer evidences that improvement in the students' test scores is due to the treatment which in this case is the foreign language instruction.

2. The students receiving Latin or other foreign language instructions receive extra time of language instruction which must be taken from the time devoted to other subjects. Exposure of students to longer periods of language instruction is enough to spell difference. To control this effect, it is recommended that an experimental study be conducted wherein one group is given a period of English and another period of foreign language instruction. The second group will be given a double period on English reading. The results should prove whether intensive teaching of a subject will make a significant difference.

3. It would be interesting and helpful to know how students take to their foreign language classes. An attitude questionnaire for the children to react to or some interviews with teachers on their opinions as to the children's interest in foreign language instruction should prove enlightening.

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